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REMARKS

The Examiner is thanked for the Official Action dated April 25, 2002. The above amendment and remarks to follow are intended to be fully responsive to the issues presented in that Action.

Claims 1, 2, 4-7, 9, 10, 12 and 15 were rejected under 35 USC 102(e) as being anticipated by Bolenz et al. Claims 3, 8, 11, 13, 14 and 16 were rejected under 35 USC § 103(a) as being unpatentable over Bolenz et al. in view of Dyches et al. The Applicant respectfully disagrees.

With regard to the present invention, the alternator/starter 1 and the supplementary starter 5 do not simultaneously perform a starting function. Rather, “if the internal-combustion engine has not started at the end of Time T, the power supply to the alternator/starter 1 is shut off, then the supplementary starter 5 is started up, so that its meshing pinion advances, then meshes with the toothed ring 6 (power-supply phase [2]). **After meshing occurs**, the alternator/starter 1 is again powered in motor mode (power-supply phase [3]).” See page 7, lines 22-30 of the Specification.

With regard to the prior art, Dyches discloses a starting apparatus having **only** a starter motor, not a starter and a supplementary starter as in the present application; and, Bolenz fails to disclose the use of a starter and a supplementary starter to independently act on the internal-combustion engine as explained in the immediately preceding paragraph. See Id.

The Examiner asserts that Dyches teaches detecting a failure to start in an internal combustion engine. However, Dyches fails to teach use of an alternator/starter and a supplementary starter as explained in the present application. The Examiner asserts that it would

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be obvious to combine the teaching of Dyches with Bolenz. However, neither prior art reference provides motivation to employ only the alternator/starter and the supplementary starter as the present application discloses.

Rather, Bolenz et al., discloses a starter 13 and a starter generator 14 that **both** perform the starting function in temperatures under 30-40⁰ C. See column 3, lines 45-50; See also Fig. 2. In Fig. 3 of Bolenz, the conventional starter 23 and the starter generator device 24 operate as a motor **together** to provide the starting function for an internal-combustion engine in temperatures below 30-40⁰ C. See column 4, lines 1-6; See also Fig. 3. Bolenz et al. further emphasizes this aspect again in column 4, lines 23-25 and with reference to Fig. 4; here again, a conventional starter 37 and the starter/generator device 33 operate **together** as a motor to perform the starting function.

The prior art fails to disclose “means for **actuating the supplementary starter**, when a condition for activating the supplementary starter is detected, in such a way that its pinion meshes on a complementary ring in order to drive the internal-combustion engine, in order to drive the main electrical machine in motor mode, when the pinion of the starter has been meshed **and in order to cut off the starter** and drive the main electrical machine in generator mode when it is detected that the internal-combustion engine has started and the management means include means for cutting off the operation of the main electrical machine in motor mode, when a condition for activation of the supplementary starter is detected.” Emphasis added. The prior art discloses wherein “wherein the internal combustion engine is cold, [the] **conventional starter and [the] starter/generator both perform a starting function.**” See column 6, lines 24-27,

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emphasis added.

Therefore, in light of the foregoing amendments and comments, the rejection under both 35 USC § 102 and 35 USC § 103 is improper. It is respectfully submitted that this application containing claims 1-3, 6-8 and 11 is in condition for allowance and notice to that effect is earnestly solicited. Should the Examiner believe additional discussion would advance the prosecution of the instant application, he is invited to contact the undersigned.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

RICHARD, D.

Serial No.: 09/787,952

Examiner: DOLINAR, A.

Filed: March 23, 2001

Group Art Unit: 3747

Title: SYSTEM, ESPECIALLY FOR A MOTOR VEHICLE, ABLE TO START AN
INTERNAL-COMBUSTION ENGINE AND CHARGE AN ELECTRICAL
CIRCUIT

APPENDIX OF AMENDMENTS

IN THE CLAIMS

Please cancel claims 4, 5, 9, 10 and 12-16

Please amend claims 1, 2, 3, 6, 7, 8 and 11 as follows:

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1. (Amended) System[, especially] for a motor vehicle, able, on the one hand, to start up an internal-combustion engine and, on the other hand, to charge an electrical circuit, including a main electrical machine able to operate, on the one hand, as a generator and, on the other hand, as an electric motor, [the] said electrical machine driving the internal-combustion engine by means of a belt when [it] said main electrical machine is operating in motor mode, the system further [including] comprises a management means which drive the main electrical machine,

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[characterised in that it includes] further comprising a supplementary starter, as well as means for detecting at least one condition for triggering [the] activation of [the] said supplementary starter, and the management means drive the main electrical machine and the starter, according to a particular sequence, when [the] said condition is detected by [the] said detection means, wherein the management means include means for actuating the supplementary starter, when a condition for activating the supplementary starter is detected, in such a way that its pinion meshes on a complementary ring in order to drive the internal-combustion engine, in order to drive the main electrical machine in motor mode, when the pinion of the starter has been meshed and in order to cut off the starter and drive the main electrical machine in generator mode when it is detected that the internal-combustion engine has started and the management means include means for cutting off the operation of the main electrical machine in motor mode, when a condition for activation of the supplementary starter is detected.

2. (Amended) System according to Claim 1, [characterised in that the] wherein said detection means include at least one temperature sensor, as well as means for comparing a temperature measured by [the] said sensor with a particular low threshold.

3. (Amended) System according to Claim 1, [characterised in that] wherein the detection means include means for detecting a failure to start at the end of a given time during which the main electrical machine is operating in motor mode.

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6. (Amended) Method for control of a system, especially for a motor vehicle, able, on the one hand, to start up an internal-combustion engine and, on the other hand, to charge an electrical circuit, including a main electrical machine able to operate, on the one hand, as a generator and, on the other hand, as an electric motor, [the] said main electrical machine driving the internal-combustion engine by means of a belt when it is operating in motor mode, [characterised in that, with the] wherein said system [including] further comprises a supplementary starter, wherein at least one condition for triggering [the] activation of [the] said supplementary starter is detected, and the main electrical machine and the starter are driven according to a particular sequence when [the] said at least one condition is detected, when said at least one condition for activation the supplementary starter is detected, the supplementary starter is actuated such that its pinion meshes on a complementary ring in order to drive the internal-combustion engine, the main electrical machine is put into motor mode, when the pinion of the supplementary starter has been meshed, and the supplementary starter is cut off and the main electrical machine is placed into generator mode when it is detected, and that the internal-combustion engine has started and the operation of the main electrical machine in motor mode is cut off when at least one condition for activation of the supplementary starter is detected.

7. (Amended) Method according to Claim 6, [characterised in that,] wherein in order to detect a triggering of said at least one condition, at least one temperature is measured and [a] said at least one temperature [thus measured] is compared with a particular low threshold.

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8. (Amended) Method according Claims 6, [characterised in that,] wherein in order to detect a triggering condition, a failure to start is detected at the end of a given time during which the main electrical machine is operating in motor mode.

11. (Amended) System according to Claim 2, [characterised in that] wherein the detection means include means for detecting a failure to start at the end of a given time during which the main electrical machine is operating in motor mode.